

PATENT ABSTRACTS OF JAPAN

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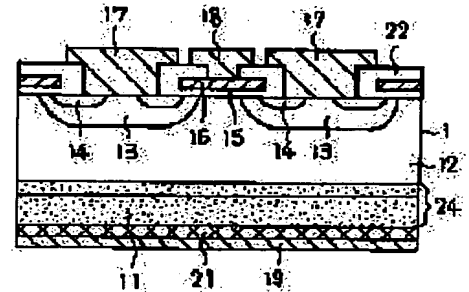
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(54) SEMICONDUCTOR DEVICE AND ITS MANUFACTURE

(57)Abstract:

PURPOSE: To optimize the amount of hole injection and also to suppress injection of other holes occurring at switching off by forming a heavy metal silicide layer between an anode electrode and an anode area, for shorter carrier lifetime of a drain area.

CONSTITUTION: At a p-type anode area 11 and the part of a drain area 12 adjoining to the p-type anode area 11, a heavy metal diffusion area 24, such as Au, is provided. With this, the lifetime of that area is short, and hole injection from the anode area rarely takes place even when the impurity concentration of the p-type anode area 11 is high, thus hole injection is suppressed to a minimum and re-injection at off-time is hard to take place. Thus, good joint to a metal anode electrode is obtained. Since the heavy metal diffusion area exists, positive hole injection from the anode area rarely takes place even when carrier lifetime of the drain area is long, so, the amount of positive hole injection is suppressed to slightrness, for good fast switching characteristics.



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